BEFORE THE
PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

In the Matter of	)	
	)	
Continued Availability of Unbundled	)	
High Capacity Loops at Certain Locations	)	
And Unbundled High Capacity Transport	)	Docket No. 20003-327-C
On Certain Routes Pursuant to the	)	
Federal Communications Commission's	)	
Triennial Review Order	)	
	)	

DIRECT TESTIMONY

OF

GARY J. BALL

ON BEHALF OF

COMPETITIVE CARRIERS OF THE SOUTH

Q. PLEASE STATE YOUR FULL NAME, TITLE AND BUSINESS ADDRESS.

A. My name is Gary J. Ball. I am an independent consultant providing analysis of regulatory issues and testimony for telecommunications companies. My business address is 47 Peaceable Street, Ridgefield, Connecticut 06877.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I graduated from the University of Michigan in 1986 with a Bachelor of Science degree in Electrical Engineering. I received a Masters in Business Administration from the University of North Carolina – Chapel Hill in 1991, with a concentration in economic and financial coursework. I have worked in the telecommunications industry for the past twelve years, and I have extensive experience in developing and analyzing financial and costing models associated with telecommunications networks and services, as well as the design, implementation, and operation of such networks and services.

From 1991 through 1993, I was employed by the Rochester Telephone Corporation (now part of Citizens Communications), where I served in various engineering, financial, and regulatory roles. From 1993 to 1994, I was the manager of Regulatory Affairs for Teleport Communications Group.

Beginning in 1994, I served initially as the Regional Director of Regulatory Affairs for MFS Communications Company for the Northeast, and subsequently was promoted to Assistant Vice President of Regulatory Affairs. In 1996, WorldCom acquired MFS, after which I was promoted to Vice President of Regulatory Policy Development. In that capacity, I was responsible for coordinating and developing the Company's regulatory positions on issues such as access charges, interconnection, intercarrier compensation, unbundled network elements, and new service technologies. I remained at WorldCom until beginning my own consulting practice in 2002.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of the Competitive Carriers of the South ("CompSouth"). CompSouth is a coalition of competitive carriers operating in the Southeast, including in South Carolina, that are committed to the advancement of policies that encourage local and long distance competition in the state. The jobs, services and customer savings that these companies provide are a product of the competitive policies of both the federal Telecommunications Act of 1996 and the laws of South Carolina governing telecommunications.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. In its Triennial Review Order ("*TRO*"), the Federal Communications Commission ("FCC") conducted a comprehensive analysis that resulted in the determination that competitive local exchange carriers ("CLECs") are impaired without access

to high capacity loops and dedicated transport at the national level. As a result, incumbent local exchange carriers ("ILECs") must continue to provide CLECs with access to unbundled loops and dedicated transport at the DS1, DS3, and dark fiber capacity levels on a widespread basis. Recognizing that there may be individual customer locations or transport routes where competitively provisioned loops and transport have been deployed to such an extent that the national finding does not apply and CLECs may not be impaired, the FCC developed a procedure known as the trigger analysis ("triggers"). The triggers are designed to give ILECs an opportunity to rebut the national finding at specific customer locations or on specific transport routes where actual deployment demonstrates non-impairment at that location or on a particular transport route.

The purpose of my testimony is to provide the Public Service Commission of South Carolina ("Commission") with a workable framework for evaluating ILEC claims of non-impairment that is faithful to the principles and requirements set forth in the *TRO*. As I demonstrate, the ILECs face a significant burden in satisfying the rigorous granular analysis of the triggers, and the Commission should cast a suspicious view upon any ILEC claims that the triggers have been satisfied on a large scale.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. My testimony is divided into six parts. In part one, I discuss the FCC's impairment analysis and how it relates to the unbundled loop and transport

services necessary for a facilities-based CLEC to compete effectively with the ILECs. In part two, I explain the self-provisioning triggers that the FCC devised for high capacity loops and dedicated transport at the DS3 and dark fiber capacity levels, and I provide the proper framework for interpreting an ILEC's claim that the triggers have been met. In part three, I explain the wholesale triggers for high capacity loops and transport, and I discuss the additional requirements needed to define a carrier as a wholesale provider. In part four, I discuss situations where competitive providers still may be impaired for a customer location or route even if the trigger has been met. In part five, I discuss the concept of potential deployment claims, including the fact that DS1-level loops and transport are not eligible for potential deployment claims. Lastly, in part six, I describe the transitional issues that the Commission should consider in order to protect CLECs and their customers from unanticipated disruption to their services and rates if the Commission de-lists any loops or transport routes.

I. THE FCC'S IMPAIRMENT ANALYSIS

Q. PLEASE DESCRIBE THE FCC'S POLICY OBJECTIVES THAT PROVIDE THE FRAMEWORK FOR THE TRIENNIAL REVIEW IMPLEMENTATION.

A. When applying the rigorous standards for the granular analysis, it is imperative that the Commission keep the *TRO*'s three policy objectives at the forefront. First, the *TRO* continues the Commission's implementation and enforcement of the federal Act's market-opening requirements. This objective is critical because

it recognizes the importance of providing a regulatory environment that is conducive to competition. Second, the *TRO* applies unbundling as Congress intended: with a recognition of the market barriers new entrants encounter as well as the societal benefit of unbundling. This is critical because it recognizes the balance that is required to ensure that consumers are able to realize the benefits of competition through better telecommunications options at lower costs. This objective further recognizes the consumer's investment in the ILEC's monopoly network and the objective of delivering better services and lower costs to consumers through competition. Finally, the *TRO* establishes a regulatory foundation that seeks to ensure that investment in telecommunications infrastructure will generate substantial, long-term benefits for all consumers.

Q. PLEASE DESCRIBE THE FCC'S APPROACH TO DETERMINING IMPAIRMENT FOR UNBUNDLED NETWORK ELEMENTS.

A. The FCC based its impairment findings upon a determination that "[a] requesting carrier is impaired when lack of access to an incumbent LEC network element poses a barrier or barriers to entry, including operational and economic barriers, that are likely to make entry into a market uneconomic." *TRO* ¶ 7. The FCC also found that "[a]ctual marketplace evidence is the most persuasive and useful evidence to determine whether impairment exists." The FCC elaborated that it is particularly "interested in the relevant market using non incumbent LEC facilities." *Id.*

Q. WHAT DID THE FCC CONCLUDE WITH REGARD TO HIGH CAPACITY LOOPS AND DEDICATED TRANSPORT?

A. The FCC concluded that competing carriers are impaired on a national level without access to unbundled high capacity loops (DS1, DS3, and dark fiber) and transport (DS1, DS3, and dark fiber). *See TRO* ¶ 202 (stating that "requesting carriers are impaired on a location-by-location basis without access to incumbent LEC loops nationwide."); *see also TRO* ¶ 359 (stating that it finds "on a national level that requesting carriers are impaired without access to unbundled dark fiber transport facilities … [DS3 transport and DS1 transport])." As a result, the FCC rules require that competing carriers have access to unbundled loops and transport everywhere unless a specific location or route has been found to lack impairment.

Q. DID THE FCC'S IMPAIRMENT ANALYSIS DISTINGUISH BETWEEN DIFFERENT TYPES OF UNBUNDLED LOOPS AND TRANSPORT?

A. Yes. The FCC defined two distinct loop types: Mass Market Loops, representing voice-grade DS0-level loops, and Enterprise Market Loops, representing higher capacity loops, which typically are used by business customers. The FCC defined Enterprise Market Loops as loops at a capacity level of DS1 or above; the FCC analyzed these loops separately at the following capacity levels: OC(n), dark fiber, DS3, and DS1. For the purposes of my testimony, Enterprise Market Loops are equivalent to high capacity loops.

The FCC segregated dedicated transport by capacity levels before performing its impairment analysis, stating that this would "be the most informative manner to review the economic barriers to entry that affect how a competing carrier is impaired without access to unbundled transport." *TRO* ¶ 380. The FCC performed separate impairment analyses for OC(n) Transport, Dark Fiber Transport, DS3 Transport, and DS1 Transport.

Q. WHAT WAS THE FCC'S BASIS FOR FINDING THAT COMPETING CARRIERS ARE IMPAIRED WITHOUT ACCESS TO HIGH CAPACITY LOOPS AT THE DARK FIBER, DS3, AND DS1 CAPACITY LEVELS?

A. The FCC's impairment analysis places substantial emphasis on two factors: whether carriers can economically self-provision high capacity loops, and whether competitive alternatives exist. The FCC based its finding that competing carriers are impaired without Enterprise Market Loops at the dark fiber, DS3, and DS1 capacity levels largely on the fact that the costs to construct loops and transport are fixed and sunk. The FCC stated that "[b]ecause the distribution portion of the loop serves a specific location, and installing and rewiring that loop is very expensive, most of the costs of constructing loops are sunk costs." *TRO* ¶ 205. The FCC concluded that it would be extremely difficult to recover these construction costs and be a viable competitor in the marketplace.

The FCC found that there are substantial economic and operational barriers to deploying loops. For example, the FCC found that "the cost to self-deploy local

loops at any capacity is great . . . and that a competitive LEC that plans to self-deploy its facilities must target customer locations where there is sufficient demand from a potential customer base, usually a multi-tenant premises location, to generate a revenue stream that could recover sunk construction costs of the underlying loop transmission facility …." *TRO* ¶ 303. The FCC emphasized, however, that other obstacles to deploying high capacity loops exist even if the carrier can overcome the cost issues. For example, carriers encounter barriers in obtaining reasonable and timely access to the customer's premises and in "convincing customers to accept the delays and uncertainty associated with deployment of alternative loop facilities." *Id.* (citations omitted).

Q. WHAT WAS THE FCC'S BASIS FOR FINDING THAT COMPETING CARRIERS ARE IMPAIRED WITHOUT ACCESS TO UNBUNDLED DEDICATED TRANSPORT AT THE DARK FIBER, DS3, AND DS1 CAPACITY LEVELS?

A. The FCC stated that its impairment findings with respect to DS1, DS3, and dark fiber transport facilities "recognize that competing carriers face substantial sunk costs and other barriers to self-deploy facilities and that competitive facilities are not available in a majority of locations, especially non-urban areas." *TRO* ¶ 360 (citations omitted). The FCC concluded that it would be extremely difficult to recover these costs and to be a viable competitor in the marketplace. Indeed, the FCC concluded that "[d]eploying transport facilities is an expensive and time-consuming process for competitors, requiring substantial fixed and sunk costs."

Id. ¶ 371 (citations omitted). The FCC elaborated that the costs of self-deployment include collocation costs, fiber costs, costs to physically deploy the fiber, and costs to light the fiber. *Id.* CLECs also encounter delays in constructing dedicated transport due to having to obtain rights-of-way and other permits. *Id.*

Q. DID THE FCC FIND THAT THERE WAS ANY EVIDENCE OF NON-IMPAIRMENT FOR ENTERPRISE MARKET LOOPS AND DEDICATED TRANSPORT AT THE DARK FIBER, DS3, AND DS1 LEVELS?

A. In making a national finding of impairment for loops and transport, the FCC found that evidence of non-impairment was isolated and minimal. For example, the FCC found little evidence of self-deployment for DS1 loops, *TRO* ¶ 298, and found "scant evidence of wholesale alternatives" for DS1 loops. *TRO* ¶ 325.

For transport, the FCC found that "alternative facilities are not available to competing carriers in a majority of areas." *TRO* ¶ 387. Indeed, even relying on ILEC data, which was not subject to cross-examination in the FCC proceeding, at most 13% of BOC wire centers have even a single competing carrier collocated using non-ILEC transport facilities. *TRO* at note 1198. Depending upon the trigger, there must be two or three such competitors (also satisfying additional criteria) on each route. Therefore, based on this analysis, one would expect that there will be only a small number of loops and transport routes at issue in this proceeding.

Q. ARE THE FCC'S FINDINGS ON IMPAIRMENT CONSISTENT WITH THE TYPICAL FACILITIES-BASED CLEC'S NETWORK?

A. Yes. CompSouth's members use a variety of entry strategies to provide services to their customers. CompSouth members that provide facilities-based local services rely on UNE loops to serve the majority of their customers. CompSouth members also use loop and transport UNEs in a combination commonly referred to as an "enhanced extended link" or "EEL." EELs are a predominant reason facilities-based CLECs need access to unbundled dedicated transport, as they allow CLECs to access customers in central offices where they are not collocated, greatly expanding the scope of customers they can serve.

Generally, facilities-based CLECs have constructed one or more fiber rings of varying scope, and connect customers to their network using those fiber rings whenever practical. Multiple fiber rings exist for a variety of reasons, including, for example, construction funding limitations, unanticipated capacity requirements, building issues, such as right of way access or construction moratoriums that precluded a comprehensive and cohesive build-out strategy, and acquisitions. These CLECs serve customers using their fiber rings when possible, although in a majority of instances, they will need access to unbundled loops and loop/transport combinations (EELs) to provide service to customers.

In a majority of instances, however, CLECs still need access to unbundled loops and loop/transport combinations. Facilities-based CLEC networks typically rely on UNE loops to serve the majority of their customers, as the fixed and sunk costs associated with building out loop facilities, as well as the delays in constructing such facilities, would place the CLECs at a disadvantage such that they would not be able to compete with the ILECs' already deployed networks. Regardless of how they are configured, loop and transport facilities are critical to serving customers.

Q. HOW DOES THIS NETWORK ARCHITECTURE IMPACT THE TRIGGER ANALYSIS?

A. Fundamentally, CLEC networks do not replicate the ILEC network either in scale or in network architecture. The primary function of a CLEC fiber ring is to move traffic from an aggregation point to the CLEC's switching or hub site. This architecture allows the CLEC to purchase unbundled local loops dedicated to specific customers, aggregate the traffic onto a large capacity facility, and carry the traffic to its switch for call processing purposes. In other words, CLEC networks typically are built to utilize unbundled network elements – principally loops and transport – not to substitute for them entirely.

As a result, the existence of fiber facilities does not by itself mean that the CLEC provides transport between ILEC wire centers. First, as I explain in Part Two of my testimony (at pp. 21-23), although a typical CLEC network will have multiple

"on-net" aggregation points, it would be a misinterpretation of the FCC's triggers to conclude that each pair of these aggregation points has CLEC-owned transport facilities between them. Assume, for example, that a CLEC has an "on-net" presence at aggregation points A and B. The typical CLEC network will be configured to carry traffic from point A to the switch, and, similarly, from point B to the switch. It does not carry traffic from point A to point B. (Most often, these two connections will travel on separate fiber strands within the ring.) The configuration is not unlike the design of some elevators in very tall buildings. One elevator may provide access to the 40th floor, while a separate elevator operating in a separate shaft accesses the 12th floor. Even though a person in the lobby can reach either floor, it is not the case that a person on the 40th floor can stop his elevator on the 12th floor.

Second, in many situations, a CLEC will serve two ILEC central offices that are not on the same fiber ring. Although it is theoretically possible to connect central offices on different fiber rings, transport routes linking the two central offices are not ordinarily provisioned in this manner. Applying an elevator analogy, this is like going from the 40th floor in one building to the 12th floor in another. Once in a while, one could get there by going down to the lobby, exiting the building, walking to the other building and using the elevator to reach the 12th floor in the second building. It is possible and maybe even tolerable if no other solution is available, but one would not want to do this every day.

II. SELF-PROVISIONING TRIGGERS FOR HIGH CAPACITY LOOPS AND TRANSPORT

Q. WHAT ARE THE PURPOSES OF THE FCC'S SELF-PROVISIONING TRIGGER FOR UNBUNDLED LOOPS AND TRANSPORT?

A. In the *TRO*, the FCC made a national finding that CLECs are impaired without access to high-capacity loops and dedicated transport. The FCC allowed ILECs to challenge these findings before state commissions on a location- and route-specific basis. One of the ways an ILEC may demonstrate non-impairment is by showing that CLECs themselves provide high-capacity loops and dedicated transport to a degree that is sufficient, at least in theory, to provide customer choice and to exert a competitive discipline upon the incumbent. This trigger is referred to as the "self-provisioning trigger."

The self-provisioning triggers are intended to identify the customer locations and transport routes where sufficient deployment of competitively owned facilities exists to allow a state commission to conclude that competitors are not impaired without access to the unbundled loops or unbundled transport, even if the competitors that own those facilities do not make them available to other competitive providers.

Q. WHAT CAPACITY LEVELS ARE SUBJECT TO THE SELF-PROVISIONING TRIGGERS?

A. The self-provisioning triggers only apply to DS3 and dark fiber loops and transport. *TRO* ¶¶ 334, 409. DS1 loops and transport are not included under these triggers. In other words, regardless of how much self-provisioned deployment may exist at a customer location or on a route, a DS1 UNE will continue to be available to a requesting CLEC.

Q. WHO HAS THE BURDEN OF PERSUASION FOR DEMONSTRATING A LACK OF IMPAIRMENT AT A CUSTOMER LOCATION OR ON A TRANSPORT ROUTE?

A. Under the *TRO*, the ILEC has the burden of producing evidence that the trigger has been satisfied at the particular locations or routes and for each capacity level. The Commission is required to make a demonstration only for those routes for which the ILEC has presented "relevant evidence" that competing carriers would not be impaired without access to UNE loops and transport. Since it is the ILECs that are challenging the FCC's finding of impairment, then it is the ILECs that bear the burden of proving that the triggers have been satisfied.

Q. WHAT MUST AN ILEC DEMONSTRATE TO THE COMMISSION TO SATISFY THE SELF-PROVISIONING TRIGGERS AT THE RELEVANT CAPACITY LEVEL?

A. For loops, the ILEC must demonstrate that there are ***two or more*** competing providers that have deployed their own facilities at the specific capacity level (DS3 or dark fiber), and are serving customers using those facilities. For

transport, the ILEC must demonstrate that there are ***three or more*** competing providers that have deployed their own facilities at the specific capacity level (DS3 or dark fiber), and are offering service using those facilities.

Q. WHAT MUST AN ILEC DEMONSTRATE TO PROVE THAT THE SELF PROVISIONING TRIGGER IS SATISFIED FOR HIGH CAPACITY LOOPS AT A SPECIFIC CUSTOMER LOCATION?

A. The ILEC must demonstrate that the two competitive providers:

- Are not affiliated with each other or the ILEC;
- Use their own facilities and not facilities owned or controlled by the other competitive provider or the ILEC; and
- Are serving customers using their own facilities at that location over the relevant capacity level.

The ILEC must make this demonstration for each location for and for each capacity level for which it challenges the FCC's finding of impairment.

Q. WHAT MUST AN ILEC DEMONSTRATE TO PROVE THAT THE SELF-PROVISIONING TRIGGERS ARE SATISFIED FOR DEDICATED TRANSPORT BETWEEN TWO ILEC WIRE CENTERS?

A. For each of the three competitive providers, the ILEC must demonstrate that:

- They not affiliated with each other or the ILEC;
- Each qualifying self-provisioned facility along a route is operationally ready to provide transport into or out of an incumbent LEC central office; and
- Each qualifying self-provisioned facility terminates in a collocation arrangement.

The ILEC must make this demonstration for each transport route and at each capacity level for which it challenges the FCC's finding of impairment.

Q. FOR THE SELF-PROVISIONING TRIGGERS TO BE SATISFIED, MUST A CLEC SELF-PROVISION THE SPECIFIC CAPACITY LEVEL IN QUESTION?

A. Yes. The *TRO* contemplates that the self-provisioning triggers apply when a CLEC self-provisions the particular capacity level in question.

Q. IS THE FACT THAT A CARRIER HAS OCN EQUIPMENT IN A BUILDING OR ON A ROUTE INDICATIVE OF WHETHER ANOTHER CARRIER CAN ECONOMICALLY PROVIDE STANDALONE DS3 OR DARK FIBER SERVICES?

A. No. The FCC concluded that locations and routes served by OC(n) and multiple (3 and above) DS3 facilities have significantly different economic characteristics from those served by stand alone dark fiber, DS1, and individual DS3 services. The FCC concluded that CLECs can generally receive enough revenue for OC(n) and multiple DS3 service locations and routes to offset their costs of network construction and installation, and made a national finding of non-impairment for those services. For locations and routes that only require standalone DS1 or DS3 services, the FCC concluded that CLECs cannot receive enough revenue to recover their costs of construction, and made a national finding of impairment that can be overcome on a location or route specific basis by the triggers. If the FCC

had intended for any OC(n) level service to count towards the DS1, DS3, and dark fiber triggers it would not have made such a distinction, and would have simply declared no impairment wherever any type of OC(n) service is provided instead of developing the capacity-specific triggers.

Q. WHAT ARE THE KEY CRITERIA THAT A STATE COMMISSION MUST APPLY TO ENSURE THAT THE ILECS ARE USING THE APPROPRIATE INTERPRETATION OF THE SELF-PROVISIONING TRIGGERS?

A. The first key issue is to ensure that the ILEC is defining loops and transport routes in a manner consistent with the FCC, and is applying those definitions appropriately. For loops, the FCC's definition is "the connection between the relevant service central office and the network interface device ('NID') or equivalent point of demarcation at a specific customer premises." In addition, the loop must permit the CLEC to access all units within a customer location, such as all tenants in a multi-tenant building or all buildings in a campus environment.

The FCC defined a transport route as "a connection between wire center or switch 'A' and wire center or switch 'Z'." *TRO* ¶ 401. The FCC elaborated that "even if, on the incumbent LEC's network, a transport circuit from 'A' to 'Z' passes through an intermediate wire center 'X,' the competitive providers must *offer service* connecting wire centers 'A' and 'Z,' but do not have to mirror the network path of the incumbent LEC through wire center 'X'." *Id.* (emphasis added).

Thus, the FCC requires that transport service must be offered between the two wire centers in question, and that, regardless of how the facility is physically routed, there are points of entry and exit for traffic at both of the two offices under consideration.

Q. CAN YOU PROVIDE AN EXAMPLE OF HOW THE DEFINITION OF A LOOP COULD BE MISINTERPRETED BY AN ILEC FOR THE PURPOSES OF THE SELF-PROVISIONING TRIGGER?

A. Yes. In a multi-tenant building, two CLECs may have provisioned fiber-optic facilities to serve one customer each, while the rest of the building is being served solely by the ILEC. Even though there are two competing loop facilities into the building, an ILEC request that the trigger is satisfied for the entire building, or even the two customers served by the CLECs, would be incorrect, as no customer location within the building is being served by the facilities of two or more competing providers. The key distinction in this example is that the customer location, which is the endpoint of the loop per the FCC, is a subset of a building location in a multi-tenant environment.

Q. CAN YOU PROVIDE AN EXAMPLE OF HOW THE DEFINITION OF A TRANSPORT ROUTE COULD BE MISINTERPRETED BY AN ILEC FOR THE PURPOSES OF THE SELF-PROVISIONING TRIGGER?

A. Yes. An ILEC may have performed a primitive counting exercise, in which it simply identifies all of the collocation arrangements for a given CLEC, confirms

that fiber optic facilities are present in the collocation arrangement, and then declares that transport routes exist between each collocation arrangement. This approach would be deficient, in that it presents no evidence that the CLEC in question is providing transport service between the two ILEC wire centers, which is the FCC requirement. The "evidence" does not identify the capacity levels at which the service is provided (in order to apply the trigger to each level of capacity), nor does it demonstrate that the CLEC is operationally ready to provide transport "into or out of" the two end points of the route. As I explained earlier in my testimony, CLECs generally use collocation arrangements to aggregate unbundled loops, so there is a high probability that the equipment and fiber optics installed in a collocation arrangement are not being used to provide transport between two ILEC wire centers. For example, a CLEC may have deployed equipment to concentrate voice-grade loops, such as a digital loop carrier system, or equipment to provide DSL service, such as a DSLAM, in a given central office. In these instances, the CLEC would have equipment installed in its collocation but would *not* be able to provide transport at either a DS3 or a Dark Fiber level between wire centers. To support a trigger claim, the ILEC must produce evidence that shows that the CLEC self-provisions transport service at the specific capacity level (DS3 or dark fiber) between the two wire centers and that each collocation arrangement in question is being used as an endpoint for a transport route at the specific capacity level between two wire centers.

Q. WHAT EVIDENCE MUST AN ILEC SUBMIT TO MEET THE FCC'S REQUIREMENT OF OPERATIONAL READINESS FOR THE SELF-PROVISIONING TRIGGER?

A. While the existence of CLEC facilities obviously is a prerequisite to the provision of service, that alone does not reflect whether the equipment can be used to provide the service to satisfy the trigger, whether the CLEC can provide service at the requisite capacity level, or whether CLEC has performed the necessary engineering, provisioning, and administrative tasks to ensure that service can be provided. The only reliable way of demonstrating that a CLEC is operationally ready under the self-provisioning trigger is to produce evidence that the CLEC is actually providing service at the customer location or on the given transport route. If the CLEC facilities are in use providing the requisite capacity of service and if the CLEC is able to provision additional circuits using existing equipment and facilities, then it is operationally ready to provide the service. This is consistent with the FCC's requirement that evidence be provided that CLECs are *serving* customers using self-provisioned loop facilities, and that CLECs *offer service* between two wire centers on a given transport route. *See, e.g.,* 47 C.F.R. §§ 51.319(a)(5)(1)(A), 51.319(e)(2)(i)(A).

Q. FOR PURPOSES OF APPLYING THE TRIGGERS, WHICH FACILITIES COUNT AS "OWNED FACILITIES"?

A. There are two ways that a carrier can have ownership over the facilities: (1) the carrier can have legal title to the facilities, or (2) the carrier can have a "long-

term" (*i.e.*, 10 years or more) dark fiber IRU, provided the carrier has attached the optronics (to which it has legal title) necessary to provide service or to light the fiber. If the carrier does not use its own facilities, then the carrier cannot count for purposes of the self-provisioning trigger.

Q. WHICH FACILITIES DO NOT COUNT AS "OWNED FACILITIES"?

A. Facilities obtained from other sources such as through special access arrangements, UNEs, capacity leases (unless they are long term IRUs), and all third-party provided facilities fail to qualify as "owned facilities." The FCC specifically emphasized that a CLEC "using the special access facilities of the incumbent LEC or the transmission facilities of the other competitive provider … would *not* satisfy the definition of a self-provisioning competitor for purposes of the trigger." *TRO* ¶ 333.

In addition, the triggers are designed to prevent double counting of facilities. Therefore, for purposes of the self-provisioning test, a carrier may not be using "facilities owned or controlled by one of the other two providers …." *TRO* ¶ 333. For example, if Carrier A has deployed facilities to a building or on a transport route and Carrier B purchases service from Carrier A, only one self-provisioner is present on the route. Carrier B does not own the facilities it uses to provide service to its customers.

Q. IF A CARRIER SATISFIES THE SELF-PROVISIONING TRIGGER, WILL IT AUTOMATICALLY QUALIFY AS AN ELIGIBLE PROVIDER UNDER THE COMPETITIVE WHOLESALE FACILITIES TRIGGER OR VICE VERSA?

A. No. The FCC emphasized that the triggers are separate and distinct. The purpose of the self-provisioning trigger is to determine through actual experience whether similarly situated CLECs can deploy their own facilities in order to serve their own customers. In contrast, the wholesale facilities trigger examines whether the provider makes its facilities available to other carriers on a widely available basis. Self-provisioners that do not provide service to other carriers do not qualify under the wholesale trigger. *See TRO* ¶ 414 (wholesale test does not count facilities owned by a competitor unwilling to offer capacity on a wholesale basis). Similarly, although some wholesale carriers also may self-provide facilities to serve their own customers, others may not provide any end user service and thus cannot be self-provisioners under the triggers. *See TRO* ¶ 406 & n.1256 (self-provisioner must be operationally ready to provide transport; carrier must "remain in operation" on the route). For example, an entity that operates only as a "carrier's carrier" does not qualify as a self-provisioner under the FCC's triggers.

III. <u>WHOLESALE TRIGGERS FOR HIGH CAPACITY LOOPS AND TRANSPORT</u>

Q. WHAT IS THE PURPOSE OF THE FCC'S WHOLESALE TRIGGERS FOR HIGH CAPACITY LOOPS AND DEDICATED TRANSPORT?

A. The wholesale triggers provide the ILECs an opportunity to demonstrate that there is no impairment for a specific customer location or route by identifying locations and routes for which there are a sufficient number of alternative providers offering wholesale loop and transport services, respectively, using their own facilities. The underlying premise of the wholesale triggers is that when a working wholesale market with multiple alternative sources of supply exists for loops or transport, then CLECs would not be reliant on receiving the element from the ILEC as a UNE.

Q. WOULD A WORKING WHOLESALE MARKET BE BENEFICIAL TO CLECS?

A. Yes, if the alternative facilities were available as more than a theoretical possibility. For a viable competitive wholesale market to exist, not only must competitive facilities be deployed, but also the requesting carrier must be able to use these facilities to replace ILEC UNEs in ordinary applications. It is for this reason that the FCC emphasized in the context of loops that alternative providers must "offer an equivalent wholesale loop product at a comparable level of capacity, quality and reliability." *TRO* ¶ 337. Equally important, the alternative facilities must work seamlessly with other components of a CLEC network, including ILEC-supplied UNEs. Because loops and transport must be examined separately, there will be many instances where a CLEC will purchase a UNE loop and competitive transport, or will purchase a competitively supplied loop in conjunction with UNE transport. Moreover, CLECs may face situations where

DS1 loops and transport are ordered as UNEs, but DS3 loops or transport to the same location or along the same route are ordered through competitive suppliers. These permutations make it imperative that all barriers to a competitive wholesale market be eliminated before any finding can be made that the wholesale trigger's requirements are satisfied. At a minimum, a working wholesale market requires reasonable and nondiscriminatory cross connects from the ILEC, UNE and special access ordering procedures that accommodate a multi-vendor environment, and billing processes for combinations of UNE and non-UNE arrangements.

Q. WHAT CAPACITY LEVELS ARE SUBJECT TO THE WHOLESALE TRIGGERS FOR HIGH CAPACITY LOOPS AND TRANSPORT?

A. Wholesale loops and transport at both the DS1 and DS3 level are subject to the wholesale triggers. Dark fiber loops are not subject to the trigger, but dark fiber transport is subject to the trigger.

Q. WHAT MUST AN ILEC DEMONSTRATE TO ITS STATE COMMISSION TO SATISFY THE WHOLESALE PROVISIONING TRIGGERS FOR HIGH CAPACITY LOOPS AND DEDICATED TRANSPORT?

A. The wholesale facilities trigger examines whether there are competing providers offering a bona fide product on the specific route. To satisfy the wholesale facilities trigger, the Commission must find that there are *two or more* competing providers that have deployed their own high capacity loop or dedicated transport

facilities, that are operationally ready to use those loops or transport facilities and are willing to provide loops or transport over those facilities on a widely available wholesale basis to other carriers.

In addition to evidence provided under the self-provisioning trigger, the ILECs also must demonstrate that the alternative provider is actually offering wholesale service for the specific route or location at the requisite capacity level, has equipped its network to facilitate numerous wholesale customers, and has developed the appropriate systems and procedures to manage a wholesale business.

Q. WHAT MUST AN ILEC DEMONSTRATE TO SATISFY THE WHOLESALE PROVISIONING TRIGGERS FOR HIGH CAPACITY LOOPS?

A. Specifically, under the FCC's rules, this trigger requires evidence that:

- Two or more competing providers not affiliated with each other or the ILEC are present at the customer location;
- Each provider has deployed its own facilities and is operationally ready to use those facilities to provide wholesale loops at that location;
- Each provider is willing to provide wholesale loops on a widely available basis at that location; and
- Each provider has access to the entire multiunit customer premises. *See* 47 C.F.R. § 51.319(a)(5)(i)(B).

The ILEC must make this demonstration for each customer location and at each capacity level for which it challenges the FCC's finding of impairment.

Q. WHAT MUST AN ILEC DEMONSTRATE TO SATISFY THE WHOLESALE PROVISIONING TRIGGERS FOR DEDICATED TRANSPORT?

A. Specifically, the trigger requires evidence that:

- Two or more competing providers not affiliated with each other or with the ILEC are present on the route;
- Each provider has deployed its own transport facilities "and is operationally ready to use those facilities to provide dedicated … transport along the particular route;"
- Each provider "is willing immediately to provide, on a widely available basis," dedicated transport to other carriers on that route;
- Each provider's facilities terminate in a collocation arrangement at each end of the transport route; and
- Requesting telecommunications carriers are able to obtain reasonable and nondiscriminatory access to the competing provider's facilities through a cross-connect to the competing provider's collocation arrangement." 47 C.F.R. § 51.319(e)(1)(ii).

The ILEC must make this demonstration for each transport route and at each capacity level for which it challenges the FCC's finding of impairment.

Q. IN ADDITION TO THE ISSUES RAISED IN THE SELF-DEPLOYMENT ANALYSIS, ARE THERE AREAS THE ILECS NEED TO ADDRESS IN ORDER TO SATISFY THE WHOLESALE TRIGGERS?

A. Yes. A significant issue is to properly identify the relevant wholesale providers of loops and transport, and to ensure that the ILECs are not overly broad in their identification of wholesale providers. Many carriers may provide some wholesale

services, but may not be in a position to offer the specific loop or transport services necessary to satisfy the trigger. For example, a carrier may offer wholesale long distance voice services, and also may have established collocation arrangements for the self-provision of a data service for a specific retail customer. The fact that the carrier is a wholesale provider of an unrelated service is not relevant to the trigger analysis if the carrier is not offering wholesale services specific to its collocation arrangements. The FCC also requires evidence of wholesale availability to be presented for each level of capacity.

Q. HOW IS A ROUTE DEFINED FOR PURPOSES OF APPLYING THE WHOLESALE FACILITIES TRIGGER TO HIGH CAPACITY LOOPS?

A. First, as with the self-provisioning trigger, the "customer location" side of each wholesale loop must terminate at a location that affords alternative providers access to the entire customer premises, including in multi-tenant buildings, access to the same common space, house and riser and other intra-building wire as the ILEC. If a loop does not provide alternative providers with access to the entire customer premises, then the carrier providing the loop should not be counted for purposes of either the wholesale or the self-provisioning trigger. This requirement is particularly important in the context of the wholesale trigger because the CLEC most often would be seeking to buy a wholesale loop in order to serve tenants in the building that are not already served on a retail basis by the wholesale provider. If the wholesale provider is not able to offer service to reach

customers other than its own, that carrier is not truly offering an alternative wholesale service.

Second, in the wholesale context, the "central office" side of the loop is equally important. As I explained previously, CLEC networks are designed to combine loops at certain aggregation points so that they may be multiplexed and carried on transport facilities back to the CLEC switch. In order to enable wholesale loops to be aggregated in this manner, the wholesale loop must provide a connection into the ILEC serving central office, so that competitors are able to connect a wholesale loop with another carrier's transport with either their own collocated facilities, or with ILEC UNE transport.

Q. HOW DOES THE REQUIREMENT OF OPERATIONAL READINESS APPLY TO THE WHOLESALE TRIGGERS?

A. In addition to the requirements of the self-provisioning triggers, the ILECs must demonstrate that the wholesale provider is operationally ready and willing to provide transport to other carriers at each capacity level. At a minimum, the ILEC must show that each wholesale carrier:

- Has sufficient systems, methods and procedures for pre-ordering, ordering, provisioning, maintenance and repair, and billing;
- Possesses the ability immediately to provision wholesale high capacity loops to each specific customer location identified or dedicated transport along the identified route;
- For loops, has access to an entire multi-unit customer premises;

- Is capable of providing transport at a comparable level of capacity, quality, and reliability as that provided by the ILEC;
- For transport, is collocated in each central office at the end point of each transport route;
- Has the ability to provide wholesale high capacity loops and transport in reasonably foreseeable quantities, including having reasonable quantities of additional, currently installed capacity; and
- Reasonably can be expected to provide wholesale loop and transport capacity on a going-forward basis.

Q. WHAT DOES "WIDELY AVAILABLE" MEAN FOR THE WHOLESALE FACILITIES TRIGGER?

A. To be widely available, service must be made available on a common carrier basis, for example, through a tariff or standard contract. The fact that a carrier may have provided service to only one or a few other carriers on a route is not sufficient, unless the carrier also is willing to provide comparable service to other carriers. *See TRO* ¶ 414 (trigger does not count competing carriers that are not willing to offer capacity on their network on a wholesale basis). Moreover, an offer to negotiate an individualized private carriage contract does not constitute service being widely available. In addition, each carrier identified as a wholesale provider must be able "immediately to provide" wholesale service. 47 C.F.R. § 51.319(e). If the carrier is required to construct facilities in order for the service to be made available, then the service is not widely available. Similarly, a service is not widely available if the carrier is unable to interconnect with its wholesale customers because sufficient facilities have not been terminated in the relevant

central office or if insufficient collocation space is present to accommodate new CLECs in the central office.

Q. WHAT DOES IT MEAN TO HAVE REASONABLE ACCESS TO THE WHOLESALE PROVIDER?

A. Requesting carriers must be able to access cross-connects at nondiscriminatory rates, terms, and conditions in accordance with FCC and Commission rules. In addition, ILECs must provide requesting carriers with adequate cross-connect terminations at cost-based rates, and must enable sufficient capacity expansion. If carriers are not able to cross connect at the ILEC central office, then they cannot obtain access to the wholesale providers' facilities.

As I stated above, for a competitive wholesale market to be in place, there must be proper systems and processes for ordering and provisioning. In addition, carriers must be able to obtain the service at nondiscriminatory rates and on nondiscriminatory intervals. Requesting carriers also must be able to order circuits to terminate in all qualified wholesale providers' collocation space. The Commission should inquire whether the ILEC's OSS is capable of handling LSRs that are provisioned to a wholesale provider's facilities.

Q. WHAT ARE THE REMAINING STEPS?

A. Once the Commission has determined the appropriate application of the triggers, then it must gather the evidence for each route. As I stated above, the ILEC is

responsible for challenging the national finding of impairment and must provide demonstrative evidence that the trigger is satisfied for each route and for each capacity level for which it challenges the FCC's national finding. The ILEC then has the burden of proving that the competing carriers that it has identified indeed satisfy the trigger for the particular loop/transport route at issue. The ILEC's evidence must be differentiated among each capacity type and for each loop/route.

The Commission must evaluate whether the carriers that the ILEC has identified as satisfying the trigger for each loop and route meet the qualifying criteria. The Commission then must classify the loop or route as impaired or not impaired based on all of evidence that the parties have submitted.

IV. CONTINUED IMPAIRMENT AFTER TRIGGERS HAVE BEEN MET

Q. IF A STATE FINDS THAT A TRIGGER IS SATISFIED BUT NEVERTHELESS FINDS EVIDENCE THAT IMPAIRMENT REMAINS, IS IT REQUIRED TO "DE-LIST" A PARTICULAR LOOP OR TRANSPORT ROUTE?

A. No. If a state finds that a trigger is facially satisfied but believes that impairment still exists, then the state may petition the FCC for a waiver of application of the trigger until the barrier to deployment identified by the state no longer exists. For example, in the *TRO*, the FCC explained that a state might find impairment if "a municipality has imposed a long-term moratorium on obtaining the necessary rights-of-way such that a competing carrier can not deploy new facilities." *TRO* ¶

411. As another example, ILECs have claimed collocation exhaust in many central offices throughout the state. If a CLEC cannot collocate in one or both of the central offices on the transport route, then CLECs remain impaired on that route, regardless of whether the trigger is facially satisfied.

Q. SHOULD THE COMMISSION ESTABLISH AN EXCEPTION PROCESS FOR LOCATIONS AND ROUTES WHERE THE TRIGGERS HAVE BEEN MET?

A. Yes. If a carrier demonstrates that it is attempting in good faith to construct facilities for a location or route for which UNEs are no longer available and that it is incurring a specific problem that makes construction within the applicable timeframe unachievable (*e.g.*, issues with rights-of-way or building access), then it should be permitted to seek a waiver from the Commission consistent with the problem it faces. The CLEC should be permitted to continue to purchase the identified facility as a UNE until the Commission acts on its request.

V. POTENTIAL DEPLOYMENT

Q. PLEASE DESCRIBE WHAT YOU MEAN BY POTENTIAL DEPLOYMENT.

A. A "potential deployment" analysis refers to the State Analytical Flexibility described in paragraphs 335 and 410 of the *TRO*. Under the Self-Provisioning Trigger, these paragraphs permit an ILEC to attempt to demonstrate that no

impairment exists for customer locations or routes even though the self-provisioning trigger has not been satisfied.

Q. ARE DS1-CAPACITY LEVEL LOOPS AND TRANSPORT ELIGIBLE FOR A POTENTIAL DEPLOYMENT CLAIM?

A. No. As this is an exception to the self-provisioning trigger, only DS3 and dark fiber services are eligible for potential deployment claims. This is confirmed by the omission of potential deployment rules in the DS1 triggers in Appendix B of the *TRO*. *Compare* § 51.319(e)(1) (DS1 transport) *with* § 51.319(e)(2) (DS3 transport).

Q. CAN AN ILEC MAKE A GENERAL CLAIM FOR POTENTIAL DEPLOYMENT, SUCH AS A CLAIM THAT NO IMPAIRMENT EXISTS FOR ALL BUILDINGS SERVED OUT OF A WIRE CENTER?

A. No. The FCC's language is clear that potential deployment claims must be location- or route-specific. In paragraph 335, for example, the FCC states:

> *[W]hen conducting its customer location specific analysis*, a state must consider and may also find non impairment *at a particular customer location* … if the state commission finds that no material economic or operational barriers *at a customer location* preclude a competitive LEC from economically deploying loop transmission facilities *to that particular customer location* at the relevant loop capacity level.

TRO ¶ 335 (emphasis added).

Q. WHAT TYPE OF DEMONSTRATION WOULD THE ILECS NEED TO MAKE IN ORDER TO SUCCESSFULLY PROVE NO IMPAIRMENT EXISTS AT A LOCATION OR ROUTE EVEN THOUGH THE TRIGGERS HAVE NOT BEEN MET?

A. The potential deployment test posits a situation that is extremely unlikely to occur. By definition, in order for the potential deployment analysis to be relevant, the self-provisioning trigger must *not* be satisfied. This means that there will be fewer than two carriers that have deployed loop facilities to a customer location or fewer than three carriers that have deployed transport facilities on a particular route. Importantly, since the FCC considered actual deployment to be the best evidence of impairment or non-impairment, *TRO* ¶¶ 335, 410, the failure to satisfy the trigger is strong evidence that CLECs are impaired.

If the self-provisioning trigger has not been satisfied, then absent other evidence to rebut the FCC's finding, the FCC's nationwide finding of impairment in the *TRO* would apply. Thus, the ILEC's task under a potential deployment analysis is to show that, despite the characteristics of loop or transport routes that were analyzed by the FCC, some other characteristic *on that route* overrides the barriers that created impairment in the first instance. In other words, the ILEC must demonstrate that something unique to this particular customer location or this transport route rebuts the national finding of impairment. The FCC offers no factual examples of what circumstances would satisfy this requirement, but this

theoretical set of facts is extremely unlikely to exist if the FCC triggers are applied consistent with the impairment analysis.

VI. TRANSITIONAL ISSUES

Q. IF A STATE COMMISSION FINDS THAT A TRIGGER IS SATISFIED, WHAT HAPPENS NEXT?

A. If the Commission finds that requesting carriers are not impaired without access to unbundled transport and/or loops on any particular route or at any customer location, then the Commission must establish an "appropriate period for competitive LECs to transition from any unbundled [loops or transport] that the state finds should no longer be unbundled." *TRO* ¶¶ 339, 417.

Q. WHAT ISSUES ARE INVOLVED IN ESTABLISHING AN APPROPRIATE TRANSITION PERIOD?

A. A transition period is required for two reasons. First, CLECs made specific business decisions to serve or not serve customers in reliance on the availability of UNE loops or UNE transport to the customer location or on the relevant transport route. CLECs must be able to continue to offer service to these customers after a finding of non-impairment. This consideration is essential because services to enterprise customers are contract-based and generally do not allow the provider to terminate or modify the contract based upon sudden cost increases. Without a transition period, CLECs and their customers would face significant disruptions to their services if access to unbundled loops were

disconnected or migrated to other services. A transition is needed, therefore, to prevent rate shock to customers receiving service using UNE arrangements.

Second, a CLEC cannot modify its network overnight. A litany of business arrangements will have to be negotiated, modified and implemented if a state commission determines that one of the triggers has been satisfied. For example, if a state commission determines that two or more wholesale providers make their facilities widely available to other CLECs, CLECs needing loops or transport (as the case may be) will need time to consider the alternative sources of supply that are available to them and to implement the solution that best fits each CLEC's needs. The Commission cannot assume that a CLEC will desire to transition to an ILEC-provided non-UNE service. Indeed, if the wholesale trigger is satisfied, it is because other alternatives are equally viable and presumably equally attractive to the CLEC. A transition period must build in sufficient time to enable the CLEC to make use of the alternatives that underlie the finding of non-impairment.

Q. ARE THERE ADDITIONAL TRANSITION ISSUES THE COMMISSION SHOULD CONSIDER?

A. Yes. The Commission should ensure that ILECs maintain an adequate process for ordering combinations of loops and transport, in situations where one or both network elements of the combination have been de-listed. In the *TRO*, over ILEC objections, the FCC specifically stated that competing carriers are permitted to continue to have access to combinations of loops and transport regardless of

whether one of the items has been de-listed. *See TRO* ¶ 584. Similarly, the Commission should ensure that ILECs have adequate billing processes and procedures in place for CLECs to purchase de-listed network elements, whether individually or in combination.

Q. HOW SHOULD TRANSITION ISSUES BE ADDRESSED?

A. Establishing an appropriate transition period is a complex task. Ideally, these issues should be addressed in a phase of this proceeding that immediately follows the finding of non-impairment. If the Commission follows such a procedure, ILECs should be prohibited from billing special access rates to CLECs while the Commission receives evidence on the elements necessary to protect customers from rate shock and to enable CLECs to build replacement facilities and/or to migrate to the network facilities of non-ILEC providers. In the event an interim transition is desired, I recommend the minimum components described below.

Q. WHAT IS YOUR RECOMMENDATION REGARDING THE MINIMUM COMPONENTS OF A TRANSITION PROCESS?

A. I recommend that the Commission develop a multi-tiered transition process such as the one applicable to mass-market switching. First, there should be a transition period during which CLECs may order new UNEs for locations and routes where the Commission found a trigger is met. This period should be a minimum of nine months in order to enable a CLEC to continue to offer competitive service to new customers while it explores alternatives available to it. Second, CLECs should

have a transition period for existing customers similar to that applied to line sharing and mass-market switching. The three year transition process established for customers served by line sharing arrangements may provide a useful model, with one-third of the customers to be transitioned within 13 months, and another one-third transitioned within 20 months. All loop and transport UNEs made available during these transition periods should continue to be made available at TELRIC rates until migrated.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

TABLE OF CONTENTS

Page